CURRENTAUDIO®

D-Force
Technology
By Current Audio

Multi-Channel 70 Watt Digital Class D Amplifier

AMP-1270
AMP-870

Instruction Manual

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1830 John Towers Avenue El Cajon, CA 92020 Sales 866-927-7181

Safety Instructions

1. Read these instructions completely prior to use or hook-up.
2. Keep these instructions for future reference.
3. Understand and heed all Warnings.
4. Follow all instructions.
5. Do not use amp near water.
6. Clean only with a dry cloth. Never use solvents.
7. Do not block any of the ventilation openings.
8. Do not install near heat sources such as stoves, radiators and amplifiers.
9. Do not defeat the safety purpose of the 3 prong grounding plug.
10. Protect power cord from being walked on or pinched.
11. Use only connections suggested by manufacturer.
12. Use only with an approved cart, stand, tripod, bracket or table specified by the manufacturer. When a cart is used, use with caution when moving the cart/apparatus combination to avoid possible injury caused by tipping over.
13. Unplug this amplifier during lightning storms.
14. Use an ILS-120 to protect from surges, over/under voltages and lightning strikes.
15. Refer service to a qualified service personal.
16. If you install the amplifier in a built-in installation, such as a rack or a bookcase, ensure there is adequate ventilation. **Leave 5" (127mm) of free space at the top and sides and at least 4" (100mm) at the rear.**

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation or maintenance instructions.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltages within the product's enclosure that may be sufficient magnitude to constitute a risk of electric shock to people.

WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNAL.

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Thank you for purchasing a Current Audio Multi-Channel Amplifier.

Please read this manual thoroughly before making any connections or applying AC power. This manual applies to both the AMP-1270 and the AMP-870. The AMP-870 has fewer channels (eight) compared to the AMP-1270 with twelve channels.

Follow the instructions in this manual. It will allow you to obtain the maximum performance and listening pleasure from your new amplifier.

Please retain this manual to use as a future reference.

May D-Force be with you.

Supplied Accessories

The box includes the following equipment and accessories:

- (1) Multi-Channel Digital Amplifier (AMP-1270 or AMP-870).
- (1) Grounded Power Cord for US. Europe uses a 220VAC non grounded cord.
- (1) Set of right angle Rack Mount Brackets
- (1) Instruction Manual

Specifications

Continuous Power Output *All channels driven*	70 Watts RMS at 4 ohms 50 Watts at 8 ohms
Bridged Power Output *All channels driven*	140 Watts per channel RMS at 8 ohms ***Caution: Maintain an 8 ohm load in the bridged mode***
Standby Power	< 1 watt
Power Consumption- 1270 ;870	1100 watts;800 watts
Input Sensitivity/Impedance	500mv /20,000 ohms
Signal to Noise Ratio	95 dB
Frequency Response	20 Hz to 20 kHz
Total Harmonic Distortion (Unabridged or Bridged)	0.1% THD 20 Hz to 20 kHz
Dimensions WxHxD	17" (431.8mm) x 4" (101.6mm) x 13" (330.2mm)
Weight	32 lbs (14.6kgs)

Glossary of Terms

- **Amplifier**- An electronic device for increasing the amplitude of low level electrical signals, used chiefly in sound reproduction.
- **Bridging**- Amplifier bridging is simply using 2 channels of an amplifier to drive a common load for more power.
- **Channel**- This refers to one input or output of a stereo zone.
- **Continuous Power Out**-The ability of an amp to output its full RMS power continuously.
- **Frequency Response**- Range over which an audio component can effectively produce a useable and fairly uniform, undistorted output signal.
- **Line Level**- A low level signal like a CD output that must be amplified to produce a usable audio sound level for speakers.
- **Loop Out**- A duplicate low level input signal that can be used to power additional amps to expand your zones.
- **THD**- Total Harmonic Distortion; specification that compares the output signal of the amplifier with the input signal and measures the level differences in harmonic frequencies between the two.
- **Zone**- Two channels make one Zone sometimes referred to as Room in multi-zone/room amplifiers.

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Welcome to D-Force by Current Audio

D-Force describes the latest digital technology in amplifiers by Current Audio. The D-Force amplifiers generate the equivalent analog output for speakers by using a modulated audio signal rather than the traditional digital to analog conversion. Because this amp uses pulse modulation, of these amps is 90% compared to 50% of analog. The amp is a Class D configuration (D does not stand for 'digital' but merely refers to the next letter after Class C). It does exhibit a digital-like output because the outputs are generated by turning the signal completely ON and OFF.

Features

- **Dual Power Mode-**Input power is switchable from 110VAC to 220VAC.
- **3 Prong Plug-**Grounded input power for Safety.
- **Master Power Switch-**Rear panel switch to cut power for service or hook-up.
- **Multi-Stage Protection-**Each pair of channels/zones is individually protected with internal circuitry and is indicated on the front bi-color LEDs. The amp will shut down a bad zone if it senses a short or is overdriven. ONLY the channels that are affected will turn Off and indicates by the LED turning from blue to red thus pointing to the channel in distress. The remaining zones will run unaffected and continue to provide sound without shutting down all zones.
- **Global and/or Individual Inputs–**One input signal can be universally distributed to all zones or the user can individually dedicate one or more zones to have a unique separate input. The other zones will still play the global input.
- **Gain Adjustments**–There is a global gain control that sets the maximum level to all zones. In addition, each zone has its own separate gain control to allow the user to customize each zone to match the acoustics of that room. This also sets the maximum loudness of each room.
- **Installer Friendly Connections**–Each speaker channel has pull off plugs to allow the user to make wire connections up to #14 gauge with positive screw down terminals. The IEC power cord can be disconnected at the amp for easy service. All inputs are made by easy connect gold plated RCA plugs.
- **Bridging**–If more power is required for perhaps an outside area, two channels may be combined (Bridged) to provide 140 watts at 8 ohms. This is accomplished simply by a selector switch at each zone. **CAUTION: Turn power off when making change and always maintain an 8 ohm load when in the Bridge mode.**
- **Rack Mount**–packed with each amp is an accessory pack that include brackets allowing the amp to be rack mountable. This is accomplished by attaching the rack ears with the 4 included screws.
- **Power Mode**–Power is toggled ON/OFF by the front power switch and is indicated buy the corresponding LED. It can also be triggered ON/OFF by a 12 VDC signal on the rear 3.5mm Trigger in jack. Front Power button must be in standby mode to operate trigger. LED must be red. The tip of the plug is (+).

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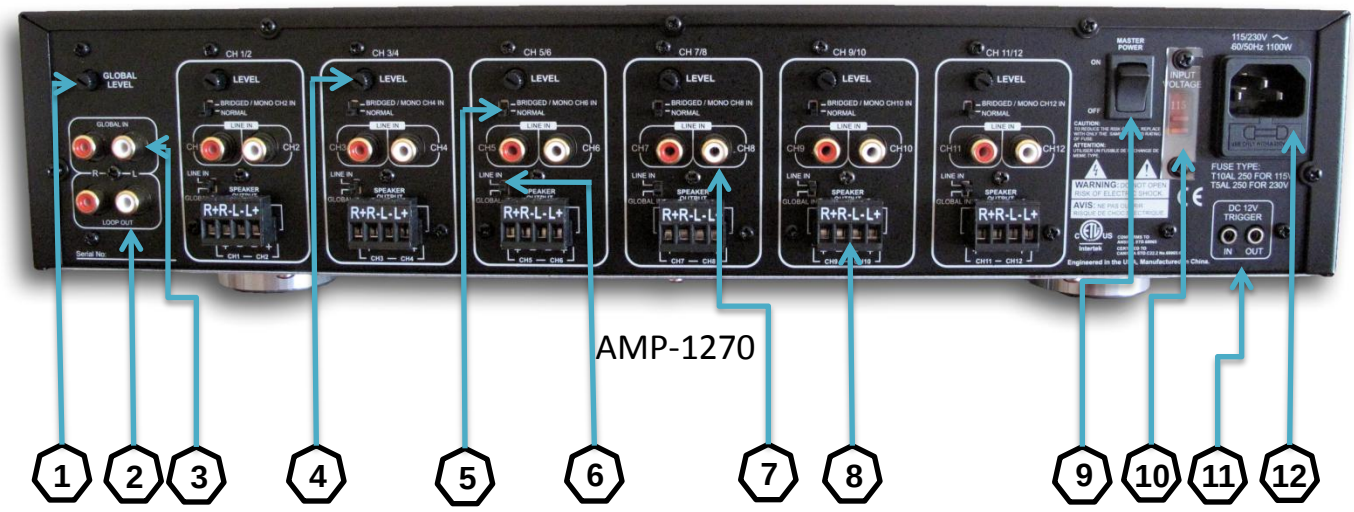
Rear Panel Elements



1. GLOBAL LEVEL

Master Gain control for Amplifier.

2. LOOP OUT

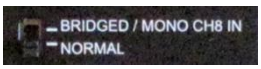
Amp can be daisy chained to additional amp inputs for more zones.

3. GLOBAL INPUT

Amplifies any source output across any or all channel zones.

4. LEVEL

Independent gain control for each individual channel zone.



5. BRIDGED NORMAL SWITCH

Combines two channels of one zone for increased power. Turn Power OFF before switching. Insert same signal to both Line In inputs for stereo. Requires two (2) Zones.

6. LINE IN – GLOBAL IN SWITCH

Select GLOBAL or LINE IN Input for each channel zone.

7. LINE IN

Individual Input for each separate channel zone.

8. SPEAKER OUTPUT

Removable plug for making screw down speaker connections. Make certain no wire whiskers touch.

9. MASTER POWER

Shuts OFF all power to the amplifier. Use for service.

10. INPUT VOLTAGE

Allows user to switch fro 115VAC to 220VAC. Remove protective cover.

11. 12VDC TRIGGER IN/OUT

Controls Power state of amp by external source. Front power button must be in Standby Mode to operate. Male Tip is (+).

12. IEC POWER-IN CONNECTOR

Plug female IEC cord here. Observe selected voltage. Also houses the main fuse. Replace only with correct fuse.

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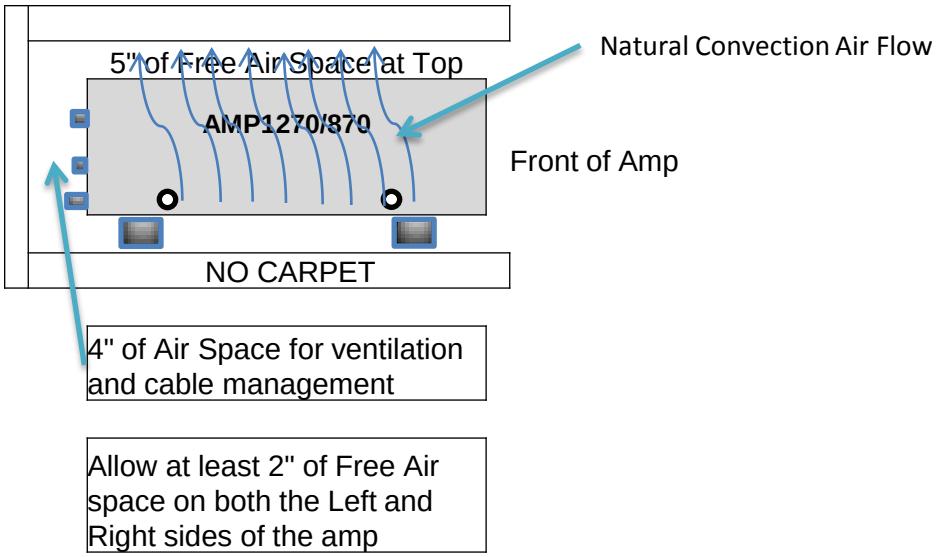
INSTALLATION
Getting Started
Amplifier Placement

Current Audio D-Force amplifiers require plenty of free air space for safe and proper operation. The following diagram indicates the minimum amount of free air space to provide the proper ventilation and heat exchange. Anything less than this will shorten the life of the equipment and may cause the amp to shut down.

Position the amp with all feet on a solid level surface in a well ventilated area. Do not place the unit on carpet. There are ventilation slots at the bottom that create a natural cooling flow as the heat rises. If installing in a rack or a cabinet it may be necessary to add a powered fan to provide cooling air flow.

Do not block the ventilation slots. Do not place on carpet or fabric. Do not place near a heat source. In order to prevent corrosion or electric shock do not place in wet or humid locations.


5" of Free Air Space at Top
Natural Convection Air Flow
AMP1270/870
Front of Amp
NO CARPET
4" of Air Space for ventilation and cable management
Allow at least 2" of Free Air space on both the Left and Right sides of the amp

INSTALLATION
Making Connections

Caution: All connections and switching should be done with the AC power switched OFF. The final connection should be the IEC power cord.

INPUTS

The inputs on the back of the amplifier are gold plated RCA connectors. Interconnect cables of equal gold plated quality that are low impedance and shielded should be used to insure a positive continuous tight connection between equipment. This will insure the total audio quality.

INSTALLATION
Making Connections

SPEAKER OUTPUTS

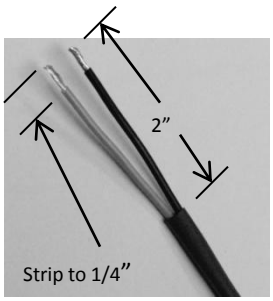
The speaker output connectors are designed for stranded wire from 18-14 gauge.

Remove about 2" of the outer jacket then strip about 1/4" insulation from each wire and slightly twist the strands to ensure all strands can be inserted into the hole on the removable black speaker connector. See the Strip Gauge figure below.

Insert the Red or copper colored conductor all the way up to the insulation into the hole at the bottom of the plug. Do the same to the Black or silver colored conductor and insert into the BLACK (-) colored Terminal. Make sure there are NO whiskers from the strands that could cause a short circuit. The other end of these wires will be connected to your amplifier or volume control.

Note: Sometimes your wire color may be White (+) and Green (-).

After tightening with a small slotted screwdriver, you should have a connection with the proper tension for continued operation that will not wiggle out or cause poor connection.



Strip Gauge

For the Right Speaker Output, insert the Red or copper colored conductor all the way up to the insulation into the hole labeled R+ at the bottom of the plug. With a small slotted screwdriver turn the screw clockwise until you have a tight connect. Try pulling the wire, you should not be able to pull the wire from the screw plug. Next do the same to the Black or silver colored conductor and insert into the R- Screw Terminal.

Do the same for the LEFT Output. Insert the Red or copper colored conductor all the way up to the insulation into the hole labeled L+ at the bottom of the plug. With a small slotted screwdriver, turn the screw clockwise until you have a tight connection. Try pulling the wire, you should not be able to pull the wire from the screw plug. Next do the same to the Black or silver colored conductor and insert into the L- Screw Terminal.

Make sure there are NO whiskers from the strands that could cause a short circuit. The other end of these wires will be connected to your amplifier or volume control.

Note: The (+) terminals are on the outside of the Speaker Plug. The (–) terminals are on the inside of the plug.
Sometimes your wire color may be White (+) and Green (-) when using a four (4) conductor audio cable.

You should now have a connection with the proper tension for continued operation that will not wiggle out or cause a poor connection that can produce intermittent audio static.

Make sure you connect the speakers to the amp *In Phase.* In Phase means (+) Red of the amp to the (+) Red of the speaker and the Black (-) of the amp to the Black (-) of the speaker. If they are connected out of phase, the mid and low frequencies will cancel and the speakers will not perform as intended.

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LOOP OUTPUT

The amp is provided with a LOOP OUTPUT. The loop output provides at a unity gain the same signal that is sourced to the GLOBAL INPUT. This output can be used to gang amplifiers to obtain more zones of music or used as a source for other components.

INSTALLATION

Setup Selections

SELECTING INPUTS

Caution: Before making any changes to the Bridged or Global In switch positions insure that the Master Power switch on the rear of the amp is OFF. Possible damage to the amp may occur due high transient current during switching or from wiring misconfiguration.

Global In/Line In Switch

This switch allows the user to select the source for each zone from the *Global In* Input or a separate source input via the *Line In* Input on each zone.

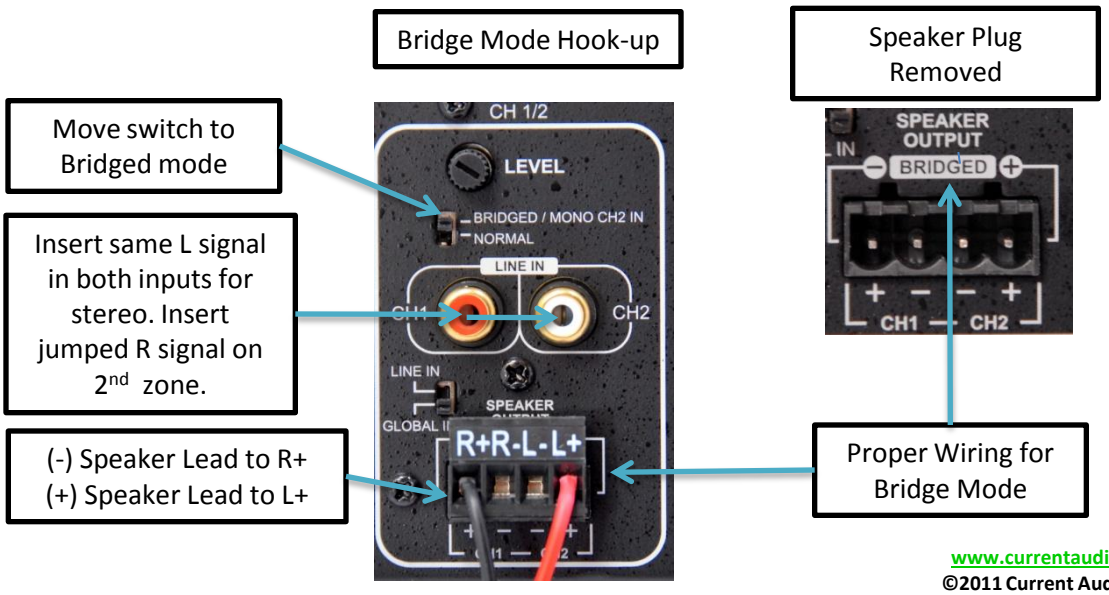
Bridge/Mono Switch

In certain instances the user may require addition power for some applications. 140 watts at 8 ohms may be obtained. When in the Bridged mode you are combining two channels per Zone to accomplish the increased power. NOTE: You will require two Zones (four channels) to get the increased power for stereo. Pull Speaker Plug to see the Bridged wiring scheme.

Caution: make sure the Master Power switch is OFF before making changes.

Position The Bridge-Mono/Normal switch to the Bridge mode. Next remove speaker plug from the chassis and connect the (-) speaker wire lead (normally black) to the R+ on the plug. Even though it may appear wrong this is correct. Now connect the (+) speaker wire lead (normally red) to the L+ on the plug. Check your work then insert the plug back into the female socket for that zone. If you require stereo select another zone and do the same for that zone. Designate one of the combined zones as LEFT and the other combined zone as the RIGHT channel.

Caution: DO NOT connect more than one speaker to the output in the Bridge mode. Maintain an 8 ohm minimum load when using the Bridge mode.



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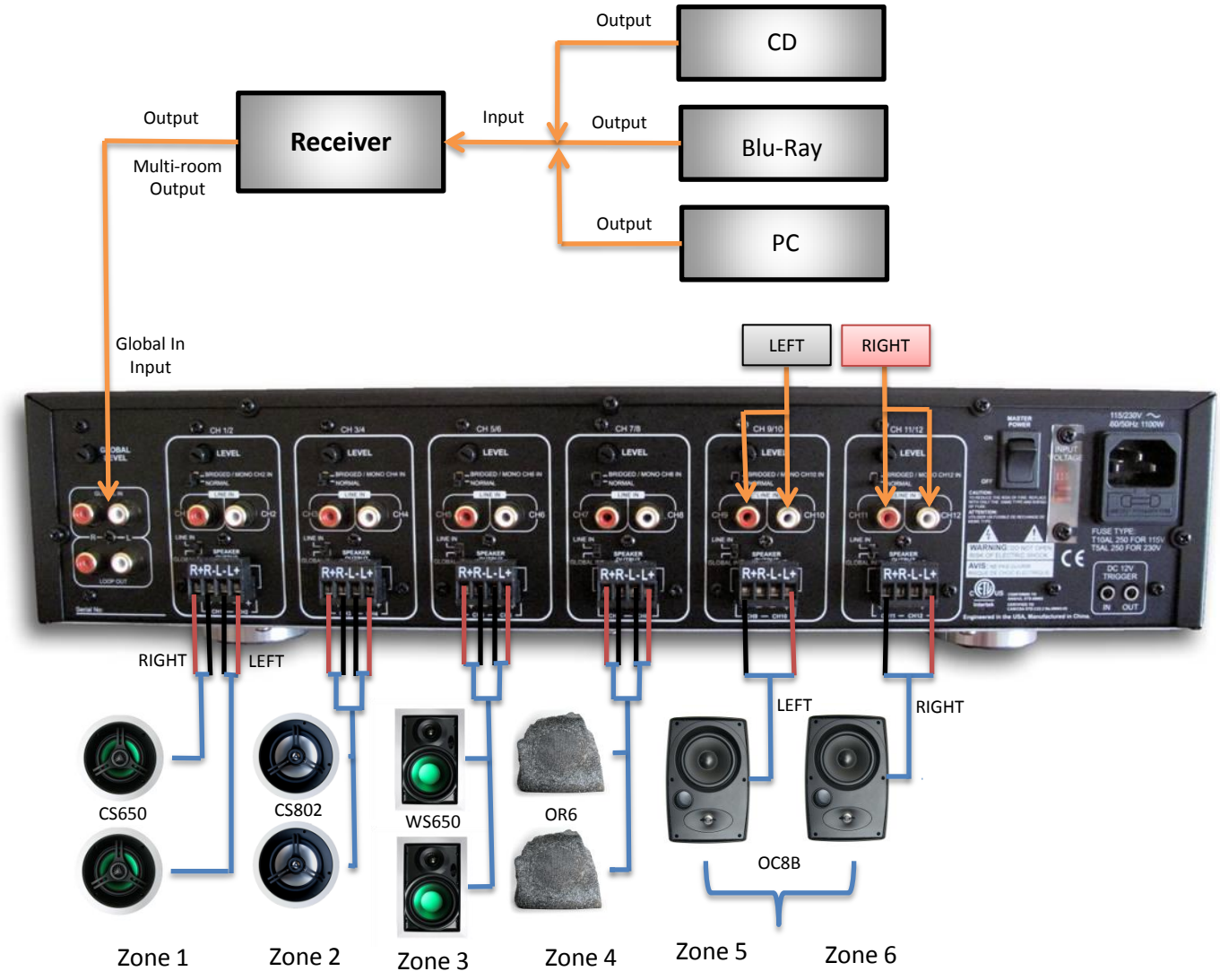
INSTALLATION

Multi-Room (Zone) Hookup



Normal Output for Stereo

Bridged Output for Stereo (Note Inputs)

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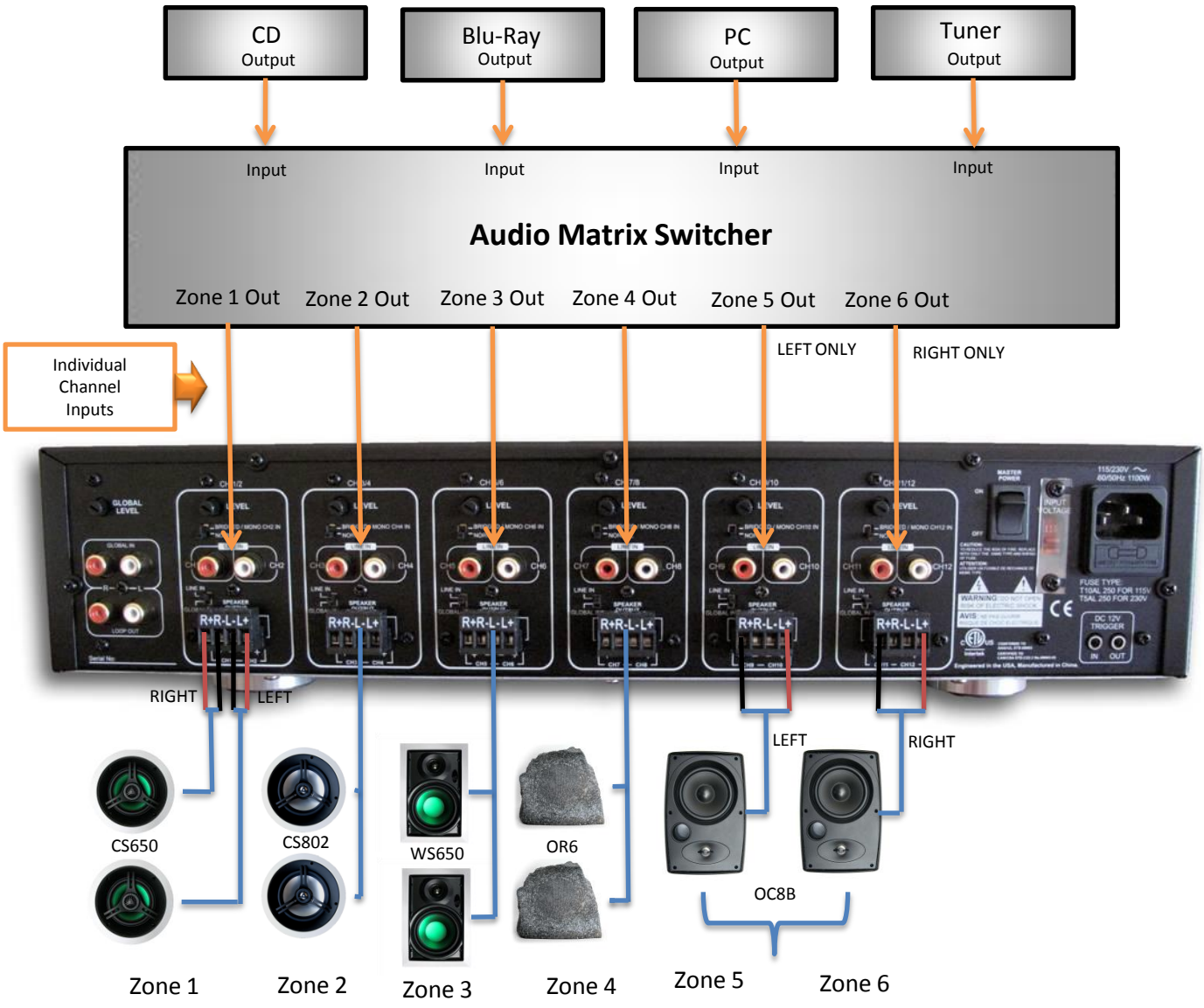
INSTALLATION

Multi-Room /(ZONE) Hookup



Normal Output for Stereo

Bridged Output for Stereo

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INSTALLATION
Troubleshooting

Trouble	Possible Cause	Possible Solution
No Sound From Any Channel	Unit not plugged into AC power	Check power, plug in to a live unswitched outlet.
	Audio cable Not properly connected	Check cable connections. Replace cable. Check if connected to proper inputs.
	Matrix Switcher or source	Program amp/matrix switcher to send signal to your input. Select audio format on DVD.
	Master Power Switch on rear of amp	Place Master Power switch to ON.
	Front Power Switch	Toggle the Power Switch until the light glows BLUE. Is 12 Volt Trigger applied?
No Audio from One or More Channels	Source cable may be faulty	Check cable and output from source.
	Input Selection switch or Bridge/Normal switch may be in wrong position.	Verify Normal/Line-In switch is in proper position. Check Bridge/Normal switch position. Refer to manual for proper settings.
	Speaker Wire or Speaker	Check the speaker connections. Make sure there are no whiskers that could cause a short. Any short will cause that zone to shut down both channels.
No Audio from One Channel or One Zone Only	Check Front LED Above that Zone	If RED you may have a short or bad speaker. Measure ohms of wire with speaker plug out. Should read about 6.5ohms for a 8ohm speaker. Correct problem- replace wire and/speaker. If using a manual volume control check the connections and plug locations. Switch Speaker Plug with a zone that is working.
	Rear zone Level adjustment turned down	Slowly increase the level clockwise until adequate level is achieved.
	Audio cable not properly connected	Check cable connections. Replace cable. Check if connected to proper inputs
	Input Selection Switch or Bridge/Normal Switch may be in wrong position	Verify Normal/Line-In Switch is in proper position. Check Bridge/Normal Switch position. Refer to manual for proper settings.
Hum or Buzz	RCA cable not completely seated.	Push in RCA cables completely. Replace cable.
	Bad cable.	Replace cable.
	Improper or No ground	Check with a plug tester; Reverse cord; try a 2 prong adapter.
	Prewired cable ran too close to AC wires	Insert isolation transformer in-line with RCA jacks.
Hum when Receiver/Source Off	Level set too high	Turn rear Level or Global level down.
	Cable TV ground not the same as earth ground	Insert in-line ground isolator.
	Ground Loop	Common all grounds, isolate AC ground.
No Audio from Speakers	Improper Connection From Amp to Speakers	Check speaker wiring at amp to speakers and from speakers to amp.
12 Volt Trigger Not Working	Power Switch on front panel	Make sure the Switch is in standby mode indicated by a RED light. BLUE when triggered.

Considerations:

• **Global level setting**-start with Global level at zero CCW. Set each zone that is set to Global In to max CW. With a working known source connected slowly increase the Global Level to the maximum safe listening level. When the amp is energized it will not blast the speakers or damage any equipment including your ears.
• **Using a Volume Control-**set volume control to maximum then adjust that zone Level on amp for maximum listening pleasure. This will prevent extra loud volumes on energizing the amp or a particular zone.
• **Adding Zones-**If more zones or rooms of music are required you can add an extra amplifier. Use the unity gain Loop Out to connect to the input of the added amp.
• **Blended Stereo**-To obtain both Left and Right blended stereo into one speaker use the Bridge technique on one zone. Both Left and Right Preamp channels must be connected.
• **Bridged Stereo-**To obtain Stereo from two separate zones, jumper both inputs on one zone with the Left and on the other zone jumper both inputs with the Right. This will provide a true stereo high powered zone.
• **12VDC Trigger-**When using the Trigger jack to control On/Off, wire the tip of the male plug for (+) 12VDC. When 12VDC is present at the Trigger the amp will energize. The front Power Button must be in standby (RED).
• **Surge Protection-**To protect the amp from power surges and lightening strikes install the ILS120 in-line surge protector. This will protect the amp from power surges, over and under voltage from power company and lightening. The ILS120 can be used on TV, subwoofer, computer, projector or any equipment with an IEC plug.

Warranty

Limited 1 Year Warranty

Current Audio, LLC amplifiers are warranted to be free from defects in materials and or workmanship to the original retail purchaser for a period of 1 year, provided the equipment was purchased and installed from a Current Audio, LLC Authorized Dealer or Distributor.

In the event of defective materials and or workmanship, Current Audio, LLC repair or replace, at its option, the defective product at no charge to the purchaser. In order to make claim under this Warranty and to obtain performance of any obligation under warranty, please contact Current Audio or your Authorized Distributor. Instructions will be given on how to return the defective product to Current Audio. Returned products must be shipped prepaid. Proof of purchase must be provided with the product.

The Warranty does not apply to damage not resulting from defective materials and or workmanship while in the possession of the original consumer or due to unreasonable use by the original owner, which includes but not limited to improper installation, negligence, unauthorized repair or modification, or aesthetic deterioration from the environment. Products purchased by internet or unauthorized sources will void the warranty and not be honored.

Current Audio, LLC is not liable for any incidental or consequential damages, so the above limitations or inclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights, which vary from state to state within the United States.